In The Claims:

1. (Currently Amended) A dual capacitance accelerometer having a signal generator comprising:

a housing;

a first flexure plate coupled to said housing and defining a first flex axis;

a second flexure plate fixed within said housing spaced apart from said first flexure plate and defining a second flex axis in parallel relation to said first flex axis; and

a fixed plate adjacent to and in substantially parallel relation to said first and second flexure plates, said fixed plate coupled to said housing, said fixed plate and said first flexure plate defining a first distance and said fixed plate and said second flexure plate defining a second distance,

wherein said first and second distances vary in response to acceleration forces acting upon said first flexure plate and said second flexure plate, and wherein a first phase shift capacitance signal is generated as a function of signals from the signal generator and from said first flexure plate and said fixed plate, and a second phase shift capacitance signal is generated as a function of signals from the signal generator and from said second flexure plate and said fixed plate.

2. (Original) The system of claim 1 further comprising a first oscillator receiving said first phase shift capacitance signal and generate a first frequency signal in response thereto.

3. (Original) The system of claim 2 further comprising a second oscillator receiving said second phase shift capacitance signal and generate a second frequency signal in response thereto; and

a frequency subtraction device subtracting said second frequency signal from said first frequency signal and generate therefrom an overall frequency signal.

4. (Original) The system of claim 3 further comprising a linearizer receiving said overall frequency signal and generating therefrom a linearized acceleration signal including at least one of a linear or angular-tangential acceleration signal.

5. (Original) The system of claim 4 wherein said linearizer comprises at least one of a linear lookup table or a signal processor.

6. (Currently Amended) The system of claim [4] 8 further comprising an actuator activating a system component in response to a system control signal.

7. (Original) The system of claim 6 wherein said system component comprises a thruster or an attitude control device.

8. (Original) The system of claim 6 further comprising a system controller receiving said linearized acceleration signal and generating a system control signal in response thereto.

9. (Cancelled)

10. (Original) A method for operating a dual flexure plate accelerometer system comprising:

accelerating a first flexure plate and a second flexure plate in relation to a fixed plate, thereby causing a first distance between said fixed plate and said first flexure plate to change and thereby causing a second distance between said fixed plate and said second flexure plate to change;

generating a first frequency signal including a sum of a linear acceleration and an angular acceleration acting on said first flexure plate;

generating a second frequency signal including a difference of a linear acceleration and an angular acceleration acting on said second flexure plate; and

generating an angular acceleration signal from a difference between said first frequency signal and said second frequency signal.

11. (Currently Amended) The method of claim 10 further comprising maintaining said first flexure plate and said second flexure plate ~~in a common plane~~ in a state of equilibrium.

12. (Cancelled)

13. (Cancelled)

14. (Currently Amended) The method as in claim [13] 11, wherein generating an angular acceleration signal from a difference of said first frequency signal and said

second frequency signal further comprises linearizing a proportion of a difference of said first oscillator signal and said second oscillator signal.

15. (Original) The method of claim 14, wherein linearizing said difference of said first oscillator signal and said second oscillator signal further comprises determining polarities of said first oscillator signal and said second oscillator signal.

16. (Currently Amended) A system for controlling an accelerating object comprising:
a first accelerometer comprising a first capacitor sensor comprising a housing, a first flexure plate, a second flexure plate, and a fixed plate coupled to said housing,
said first flexure plate coupled to said housing a first distance from said fixed plate,
a second flexure plate coupled to said housing a second distance from said fixed plate and arranged substantially parallel with said first flexure plate,
said first flexure plate and said second flexure plate flexible responsive to acceleration forces whereby said first distance and said second distance vary as a function of said acceleration forces thereby generating a first acceleration signal including linear and angular-tangential acceleration information in response to change in said first distance and a second acceleration signal including linear and angular-tangential acceleration information in response to change in said second distance,
a first oscillator receiving said first acceleration signal and generating a first frequency signal in response thereto,
a second oscillator receiving said second acceleration signal and generating a second frequency signal in response thereto;

a frequency subtraction device subtracting said second frequency signal from said first frequency signal and generating therefrom an overall frequency signal,

a linearizer receiving said overall frequency signal and generating therefrom a linearized acceleration signal,

an actuator activating an object control device in response to an acceleration control signal; and

a system controller coupled to said first accelerometer and receiving said linearized acceleration signal and generating an acceleration control signal in response thereto, said controller further generating a flexure plate control signal to maintain said first flexure plate and said second flexure plate ~~in a common plane~~ in a state of equilibrium.

17. (Original) The system of claim 16 wherein said object control device comprises at least one of a thruster, an attitude control device, a missile steering nozzle, or a vane actuator.

18. (Original) The system of claim 16 further comprising a filter filtering said linearized signal.

19. (Currently Amended) The system of claim 16 further comprising a second accelerometer and a third accelerometer, arranged with said first accelerometer to ~~receive~~ generate cross axis thrust data, wherein said first accelerometer is coupled to a yaw torque motor, said second accelerometer is coupled to a pitch torque motor, and said third accelerometer is coupled to a roll torque motor.

20. (Original) The system of claim 16, wherein said fixed plate comprises a plurality of fixed plates.